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EXAMINER

PHAM, THOMAS K

ART UNIT

PAPER NUMBER

2121

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Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/479,031

Applicant(s)

GRANT ET AL.

Examiner

Thomas K Pham

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 129-171 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 129-171 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

## Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Response to Amendment***

1. This action is in response to request for re-consideration filed on 07/23/2003
2. Applicant's arguments with respect to claims 129, 146, 158 and 171 have been considered but are moot in view of the new ground(s) of rejection.

***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 129-136, 142-156 and 158-171 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca et al. U.S. Patent No. 6,238,338 (hereinafter DeLuca) in view of Maschke et al U.S. Patent no. 6,221,012 (hereinafter Maschke).
5. As for claim 129, DeLuca teaches an apparatus including: a hardware interface to be connected to a processing device and to an attachable sensor (fig. 8A element 71); a data module to interact with at least one sensor and with the processing device (fig. 8 element 15); a display module to display data collection results on a display of the processing device (fig. 8 element 76) but does not teach the sensor to perform data acquisition when connected to the hardware interface. However, Maschke teaches the sensor to perform data acquisition when connected to the data acquisition pod 150 (fig. 4 and col. 11 line 63 to col. 12 line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data acquisition pod of Maschke with the attachable sensors of DeLuca because it would

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provide for performing the acquisition of data while attaching the sensors to the hardware interface in order to ensure that the data furnished for monitoring accurately represent the parameters sensed by the sensors.

6. As for claim 130, DeLuca teaches the apparatus of claim 129 wherein the processing device is a handheld processing device (fig. 2 element 22).

7. As for claim 131, DeLuca teaches the apparatus of claim 129 wherein the processing device is a personal computer (fig. 1 element 15).

8. As for claim 132, DeLuca teaches the apparatus of claim 129 wherein the processing device is a combination of a handheld processing device and a personal computer (col. 6 lines 1-8).

9. As for claim 133, DeLuca teaches the apparatus of claim 129 further comprising a memory module to store data supplied by the at least one sensor (col. 3 line 60).

10. As for claim 134, DeLuca teaches the apparatus of claim 129 wherein the software module further configured to calibrate the at least one sensor (col. 6 line 65).

11. As for claim 135, DeLuca teaches the apparatus of claim 129 further comprising an alert module to notify a user of the apparatus of an event based on data provided by the at least one sensor (col. 6 lines 16-23).

12. As for claim 136, DeLuca teaches the apparatus of claim 129 further comprising a power source (col. 4 lines 20-23).

13. As for claim 142, DeLuca teaches the apparatus of claim 129 wherein the at least one sensor is an analog sensor (col. 5 lines 4-12).

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14. As for claim 143, DeLuca teaches the apparatus of claim 129 wherein the at least one sensor is a digital sensor (col. 5 lines 31-33).

15. As for claim 144, DeLuca teaches the apparatus of claim 129 wherein the data module includes an analog-to-digital converter (col. 5 line 2).

16. As for claim 145, DeLuca teaches the apparatus of claim 129 wherein the data module processes the data prior to display of the data collection results on the display (col. 9 lines 14-18).

17. As to claim 146, DeLuca teaches an apparatus comprising: a processing device (fig. 8 element 15); an attachable sensor (fig. 8 element 12); and an adjustable module connected to the processing device and to the sensor (fig. 4 element 15), the adjustable module processing data received from the sensor and displaying the data on a display of the processing device (fig. 1) but does not teach the sensor to perform data acquisition when connected to the adjustable module. However, Maschke teaches the sensor to perform data acquisition when connected to the data acquisition pod 150 (fig. 4 and col. 11 line 63 to col. 12 line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data acquisition pod of Maschke with the attachable sensors of DeLuca because it would provide for performing the acquisition of data while attaching the sensors to the adjustable module in order to ensure that the data furnished for monitoring accurately represent the parameters sensed by the sensors.

18. As for claim 147, DeLuca teaches the apparatus of claim 146 wherein the processing device is a handheld device (fig. 2 element 22).

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19. As for claim 148, DeLuca teaches the apparatus of claim 146 wherein the processing device is a personal computer (fig. 1 element 15).

20. As for claim 149, DeLuca teaches the apparatus of claim 146 wherein the processing device is a combination of a handheld device and a personal computer (col. 6 lines 1-8).

21. As for claim 150, DeLuca teaches the apparatus of claim 146 wherein the sensor is an analog sensor (col. 5 lines 4-12).

22. As for claim 151, DeLuca teaches the apparatus of claim 146 wherein the sensor is a digital sensor (col. 5 lines 31-33).

23. As for claim 152, DeLuca teaches the apparatus of claim 146 wherein the adjustable module includes an analog-to-digital converter (col. 5 line 2).

24. As for claim 153, DeLuca teaches the apparatus of claim 146 wherein the adjustable module further calibrates the sensor (col. 6 line 65).

25. As for claim 154, DeLuca teaches the apparatus of claim 146 wherein the adjustable module further generates graphical representation of the data received from the sensor (col. 9 lines 14-18).

26. As for claim 155, DeLuca teaches the apparatus of claim 146 wherein the adjustable module further directs the sensor to change data collection features of the sensor based on at least one user instruction (col. 9 lines 7-10).

27. As for claim 156, DeLuca teaches the apparatus of claim 146 wherein the adjustable module further alerts a user of the apparatus of an event based on data received from the sensor (col. 6 lines 24-26).

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28. As for claim 158, DeLuca teaches a method comprising: receiving data from an attachable sensor, connected to an attachable device (col. 3 lines 11-13), wherein the attachable device connected to a handheld processing device (fig. 2 element 22); processing the data at the attachable device (col. 3 lines 17-18); and providing results of the processing to the processing device for display (col. 6 line 6) but does not teach the sensor performing data acquisition when connected to the attachable device. However, Maschke teaches the sensor to perform data acquisition when connected to the data acquisition pod 150 (fig. 4 and col. 11 line 63 to col. 12 line 4). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data acquisition pod of Maschke with the attachable sensors of DeLuca because it would provide for performing the acquisition of data while attaching the sensors to the attachable device in order to ensure that the data furnished for monitoring are accurately represent the parameters sensed by the sensors.

29. As for claim 159, DeLuca teaches the method of claim 158 wherein the processing the data includes generating graphical representation of the data (col. 9 lines 14-18).

30. As for claim 160, DeLuca teaches the method of claim 158 wherein the processing the data includes converting the data into digital form (col. 5 lines 48-50).

31. As for claim 161, DeLuca teaches the method of claim 158 wherein the processing the data includes determining whether an event occurs (col. 9 lines 46-48).

32. As for claim 162, DeLuca teaches the method of claim 161 further comprising generating alert signal to display at the processing device if the event occurs (col. 9 lines 49-50).

33. As for claim 163, DeLuca teaches the method of claim 158 further comprising calibrating the sensor based on at least one instruction of a user (col. 6 line 65).

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34. As for claim 164, DeLuca teaches the method of claim 158 further comprising annotating the data based on at least one instruction of a user (col. 9 lines 7-10).

35. As for claim 165, DeLuca teaches the method of claims 158 further comprising changing options of the sensor based on at least one instruction of the user (col. 8 lines 13-16).

36. As for claim 166, DeLuca teaches the method of claim 165 wherein options include sampling rates (col. 8 line 15).

37. As for claim 167, DeLuca teaches the method of claim 165 wherein options include a scale of measurement (col. 8 lines 46-50).

38. As for claim 168, DeLuca teaches the method of claim 165 wherein options include measurement units (col. 8 lines 17-20).

39. As for claim 169, DeLuca teaches the method of claim 158 further comprising changing display of the data based on user actions (col. 9 lines 19-22).

40. As for claim 170, DeLuca teaches the method of claim 169 wherein the user actions are provided via a set of controls of the processing device (col. 9 lines 22-24).

41. As for claim 171, DeLuca teaches an apparatus comprising: means for receiving data from an attachable sensor (fig. 8A element 71), connected to an attachable device (col. 3 lines 11-13), wherein the attachable device connected to a handheld processing device (fig. 2 element 22); means for processing the data at the attachable device (col. 3 lines 17-18); and means for providing results of the processing to the processing device for display (col. 6 line 6) but does not teach the sensor performing data acquisition when connected to the attachable device.

However, Maschke teaches the sensor to perform data acquisition when connected to the data acquisition pod 150 (fig. 4 and col. 11 line 63 to col. 12 line 4). Therefore, it would have been



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obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data acquisition pod of Maschke with the attachable sensors of DeLuca because it would provide for performing the acquisition of data while attaching the sensors to the attachable device in order to ensure that the data furnished for monitoring accurately represent the parameters sensed by the sensors.

42. Claim 137 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca in view of Maschke and further in view of McNabb U.S. Patent No. 5,927,603.

43. As for claim 137, DeLuca and Maschke teach the apparatus of claim 129 with at least one sensor but do not teach a sensor for assessing chemical composition of a liquid sample.

However, McNabb teaches a sensor for assessing chemical composition of a liquid sample (col. 12 lines 58-60). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the chemical sensor of McNabb with the apparatus of DeLuca and Maschke because it would provide for detecting any chemical composition such as moisture content within soil for analysis in order to improve the soil condition.

44. Claims 138-141 are rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca in view Maschke and further in view of Amano et al. U.S. Patent No. 5,941,837 (hereinafter Amano).

45. As for claim 138, DeLuca and Maschke teach the apparatus of claim 129 with at least one sensor but do not teach a sensor for monitoring athletic activity. However, Amano teaches a sensor for monitoring athletic activity (col. 20 lines 36-40). It would have been obvious to one of

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ordinary skill in the art at the time the invention was made to combine the activity monitoring sensor of Amano with the apparatus of DeLuca and Maschke because it would provide for measuring the user's pulse rate and the exercise amount in order to provide guidance to the athlete's performance.

46. As for claim 139, DeLuca and Maschke teach the apparatus of claim 129 with at least one sensor but do not teach a sensor for detecting acceleration changes. However, Amano teaches the apparatus wherein the at least one sensor is a sensor for detecting acceleration changes (col. 16 line 28). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the acceleration changes sensor of Amano with the apparatus of DeLuca and Maschke because it would provide for determining the body moment in accordance with the measurement of the pulse rate sensor in order to provide guidance to the athlete's performance.

47. As for claim 140, DeLuca and Maschke teach the apparatus of claim 129 with at least one sensor but do not teach a sensor for detecting light. However, Amano teaches a sensor for detecting light (col. 16 lines 19-21). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the light detector of Amano with the apparatus of DeLuca and Maschke because it would provide for measuring the user's pulse rate from the light emitting diode in order to provide guidance to the athlete's performance.

48. As for claim 141, DeLuca and Maschke teach the apparatus of claim 129 with at least one sensor but do not teach a sensor for detecting temperature. However, Amano teaches a sensor for detecting temperature (col. 17 lines 5-10). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the temperature detector of Amano with the apparatus of DeLuca and Maschke because it would provide for determining the body

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temperature in accordance with the measurement of the pulse rate sensor in order to provide guidance to the athlete's performance.

49. Claim 157 is rejected under 35 U.S.C. 103(a) as being unpatentable over DeLuca in view of Maschke and further in view of Amano and further in view of McNabb and further in view of Durbin et al. U.S. Patent No. 6,039,258 (hereinafter Durbin) and further in view of King et al U.S. Patent No. 4,565,999 (hereinafter King).

50. As for claim 157, DeLuca teaches the apparatus of claim 146 wherein the sensor is a sensor including biological sensor, weight sensor (col. 1 lines 12-15) but DeLuca and Maschke do not teach the apparatus including: temperature sensor, acceleration sensor, radiation sensor, chemical sensor, bar code sensor, inventory tag sensor, motion sensor, infrared sensor, pH level sensor, heart monitor sensor. However, Amano teaches the apparatus including temperature sensor (col. 17 lines 5-10), acceleration sensor (col. 16 line 28) and heart monitor sensor (col. 20 lines 36-40). Furthermore, McNabb teaches the apparatus including chemical sensor and pH level sensor (col. 12 lines 58-63). Furthermore, Durbin teaches the apparatus including bar code sensor, inventory tag sensor, infrared sensor (col. 4 lines 18-23) and motion sensor (col. 7 lines 60-66). In addition, King teaches the apparatus including radiation sensor (col. 8 lines 10-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of Amano with the apparatus of DeLuca and Maschke because it would provide for determining athlete activities in accordance with the measurement of the heath's monitoring sensors in order to provide guidance to the athlete's performance. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

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combine the sensors of McNabb with the apparatus of DeLuca and Maschke because it would provide for detecting any chemical composition such as moisture content within soil for analysis in order to improve the soil condition. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of Durbin with the apparatus of DeLuca and Maschke because it would provide for data collecting operation which activated upon triggering a motion sensors. Furthermore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the sensors of King with the apparatus of DeLuca and Maschke because it would provide for detecting radiation patterns in order to recognize the direction of an object in translational motions.

### ***Response to Arguments***

51. In the remark the applicant argues that cited reference fails to disclose:

I) “a hardware interface to be connected to a processing device and to an attachable sensor, the attachable sensor to perform data acquisition when attached to the hardware interface” as to claims 129, 146, 158 and 171.

52. In response to applicant’s argument,

I) It was noted that prior art (DeLuca et al. U.S. Patent No. 6,238,338) teaches (figure 8A, the hardware interface 71 is connected to a processing device 15 and to attachable sensors 12) and prior art (Maschke et al U.S. Patent no. 6,221,012) teaches (fig. 4 and column 11 lines 45-46, “Pod 150 receives patient data from a plurality of sensors 410a-410n via terminals 411a-411n”). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to incorporate the data acquisition pod 15 of Maschke with the attachable sensors of

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DeLuca because it would provide for performing the acquisition of data while attaching the sensors to the hardware interface in order to ensure that the data furnished for monitoring are accurately represent the parameters sensed by the sensors. Therefore, limitation are met by the reference.

### *Conclusion*

53. Applicant's amendment, with respect to the new issue of claims 129, 146, 158 and 171, necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).


A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner *Thomas Pham*; whose telephone number is (703) 305-7587 and fax number is (703) 746-8874. The examiner can normally be reached on Monday-Thursday and every other Friday from 7:30AM- 5:00PM EST or contact Supervisor, *Mr. Anil Khatri*, can be reached on (703) 305-0282.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

**Thomas Pham**  
*Patent Examiner*

September 23, 2003

  
**ANIL KHATRI**  
**SUPERVISORY PATENT EXAMINER**